Amendments to the Specification:

Please replace paragraph [30] with the following paragraph:

[30] The present invention is a non-iterative method of designing a TEQ for any application that might use one. Figure 2 shows a representative block diagram 200 of a transmitter 202, which sends a signal through an analog channel 204, which is then received by a receiver 206. The receiver is then further comprised of an analog-to-digital converter 208, which converts at a rate of 1/T (with T being the period of the incoming signal). The signal is then passed to a Time Domain Equalizer (TEQ) 210, which is shown to have a z-domain response of *A(z)* 212. The equalized signal is thereafter passed to a Fast Fourier Transform (FFT) 214 for conversion of the signal. Thereafter, the signal is shown passing to higher protocol levels 216 of the receiver 206.

Please replace paragraph [34] with the following paragraph:

[34] A primary requirement on the TEQ 304 is that its output in Figure 3 shall have a duration less than C. The discrete-time representation *A(z)* is shown as 306. To formalize this requirement, the method includes the introduction of a carefully chosen signal, $B(z)$ ~~306~~ 305. *B(z)* represents the allowed residual output of TEQ in Figure 3. An idealized filter having transfer function $B(z)$ is connected as shown in Figure 3. The requirement on TEQ then becomes equivalent to the condition

$$E(z) = 0 \qquad (1)$$

wherein *E(z)* 310 is shown at the output of the summation device 308, having a form $E(z) = H(z)A(z) - B(z)$. A suitable structure for the TEQ next needs to be determined, along with the residual $B(z)$. The present invention provides a representative method for determining the coefficients comprising the residual *B(z)*.

Please replace paragraph [43] with the following paragraph:

[43] A series of flowcharts is next presented which shows certain representative steps that might be used to implement the present method. Figure 4 shows a generalized flow of steps 400. In step 402, the discrete-time version *H(z)* is formulated from the analog channel of the system to which the TEQ is being applied. In step 404, a signal *B(z)* is introduced which is a chosen signal representing the allowed residual output of the TEQ. In ~~general~~ step 406, the requirement for the TEQ is formulated so that the error signal is zero, with $E(z) = H(z)A(z) - B(z)$. Thereafter, in step ~~406~~ 408, the z-transform of the input signal is assumed to be "1," and with an error signal of zero, and therefore $H(z) = B(z)/A(z)$ and similarly $B(z) = H(z)A(z)$. In step 410, the signal *B(z)* is next formulated so that its degree is less than the cyclic prefix C. In terms of the refinement discussed above, an optional step 412 might involve further formulating the signal *B(z)* to have a desired frequency response that is flat over the middle of the band with raised-cosine roll-off at the edges.